Pump Station S-525A
Summary of Hydraulic Design Data

Revisions:
- 25 October 2000 – Comments and concurrence on design, pump station capacity criteria revised.
- 2 October 2000 – Original submission.

XY Coordinate[1] – 894020 733125
Location: Hillsboro Canal, approximately 3,400 feet east of S-39 spillway

Purpose/Operational Intent: Water Supply Deliveries, Non-Flood Control
- Pump station backpumps the Hillsboro Canal into the Hillsboro Impoundment north compartment.
- Capture available storm runoff from LWDD's E-1W-S, E-1 and E-2 via Hillsboro Canal.

Design Condition:	Non-Flood Control	1500 cfs
	Seepage Control	Required

Pump Station Capacity Criteria:
- The design pump capacity allows for a greater than 70% capture rate of the historical basin runoff outflow to tide. The Hillsboro Canal requires enhancement from S525A to LWDD E-1 to accommodate this captured outflow from LWDD E-2 westward. The increase in pump rate from original design offsets the decreased storage volume of the Ag Reserve Impoundment as designed in the Selected Plan.

Number of Pumps	5	
Pump Mix Type and Size		
	Diesel	2 @ 550 cfs
	Diesel	1 @ 250 cfs
	Electric	2 @ 75 cfs

Mix Criteria:
- The pump station will be 5 bays with 2 sets of matching pumps.
- Two electric pumps are provided for greater seepage control for higher average stages inside Imp.
- The pump mix allows for intermediate flow values while having duplicate pumps throughout the system.

Control: Remote by SCADA or Local

<u>Design Heads</u>		
Normal (7.00 HW to 16.00 TW)	9.00	feet
Maximum (5.50 HW to 16.00 TW)	10.50	feet
<u>Intake Water Surface Elevations</u>		
Maximum Non-Pumping	10.50	ft-NGVD
Maximum Pumping	10.50	ft-NGVD
Start Pumping	7.70	ft-NGVD
Normal Drawdown	6.0 to 7.5	ft-NGVD
Minimum Drawdown	5.50	ft-NGVD
Minimum Non-Pumping	5.25	ft-NGVD
Channel Invert	-9.00	ft-NGVD
<u>Discharge Water Surface Elevations</u>		
Maximum Non-Pumping	19.00	ft-NGVD
Maximum Pumping	16.00	ft-NGVD
Normal Pumping	16.00	ft-NGVD
Minimum Pumping	6.50	ft-NGVD
Minimum Non-Pumping	6.50	ft-NGVD
Channel Invert	4.00	ft-NGVD

Notes:
- [1] XY coordinates system used is NAD 83, Florida east, state plane.
- All elevations are in feet, NGVD (National Geodetic Vertical Datum of 1929)
- Diesel generator is required for control station and electric pumps in cases of power outage.

Data Compiled from: S-39 TW records and WPA Alternative hydrograph evaluations.